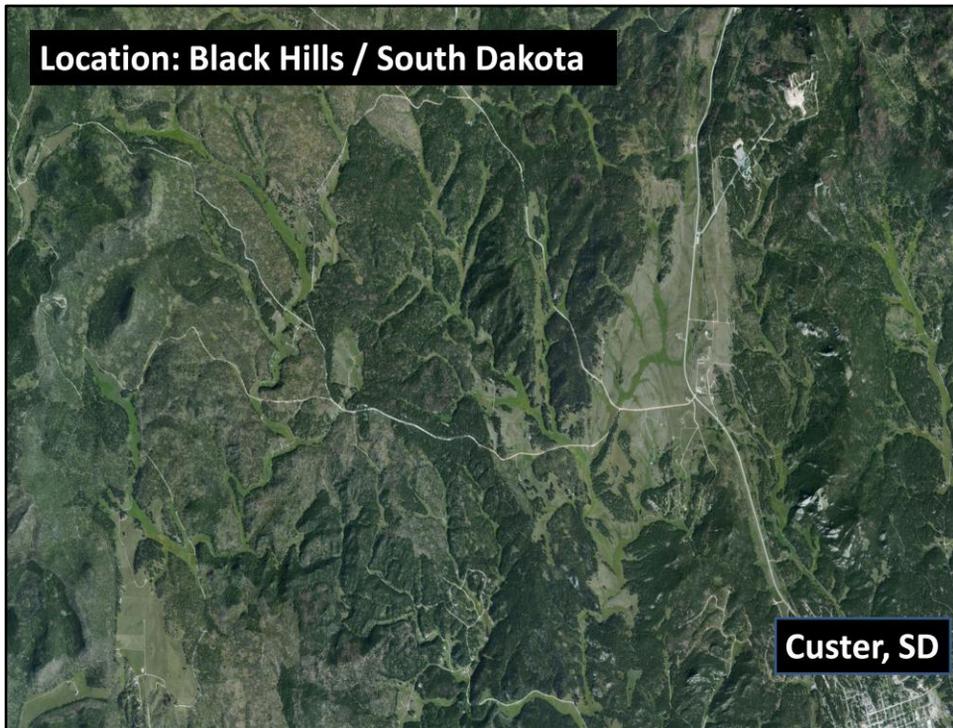


LANDFIRE Updating Process: Black Hills, SD

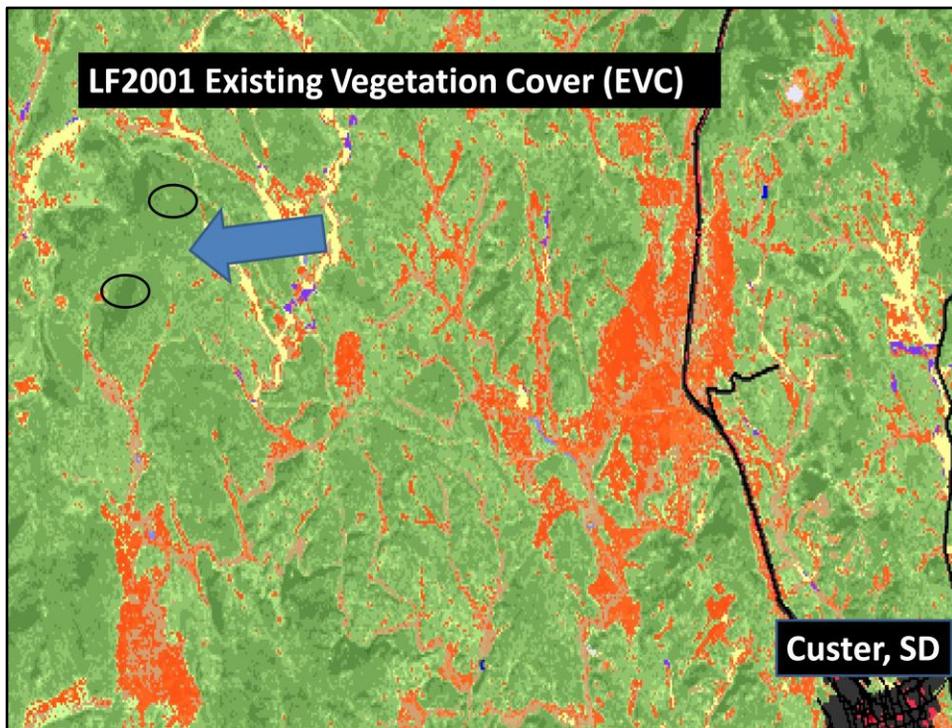
- Improve user understanding of the LANDFIRE update process
- Demonstrate how disturbance data submitted to LANDFIRE contributes to the LANDFIRE update process



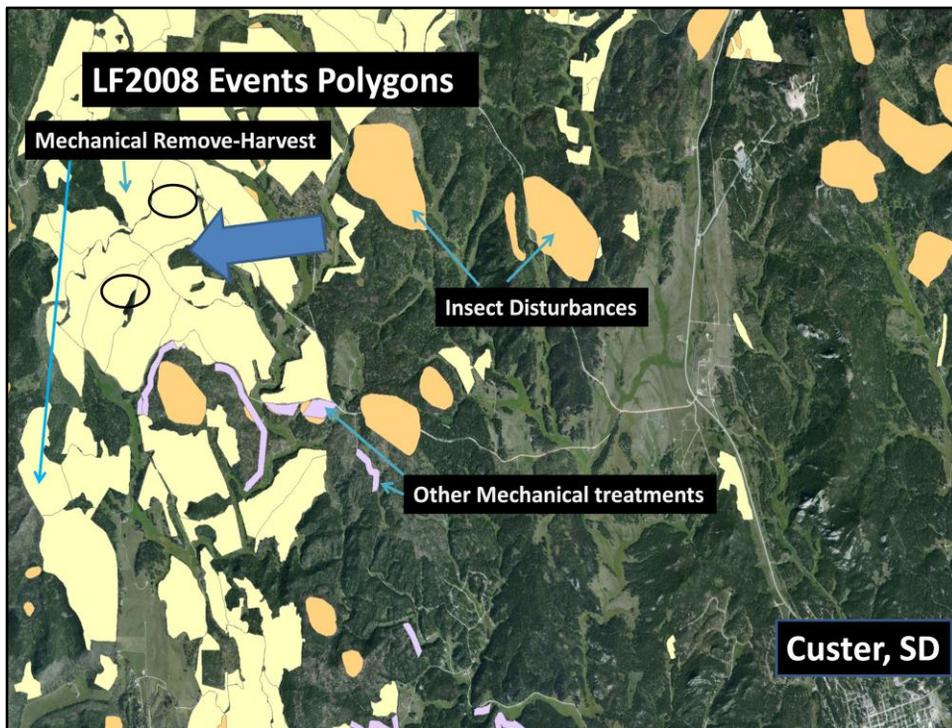
- LANDFIRE continues to update and improve program products. It is important that current and potential users understand how the products are updated not only because they use those products, but because users can play a vital role in the update process.
- This presentation focuses on an area in western South Dakota and demonstrates how disturbances submitted to national data bases or LANDFIRE by local personnel are used in the LANDFIRE update process.



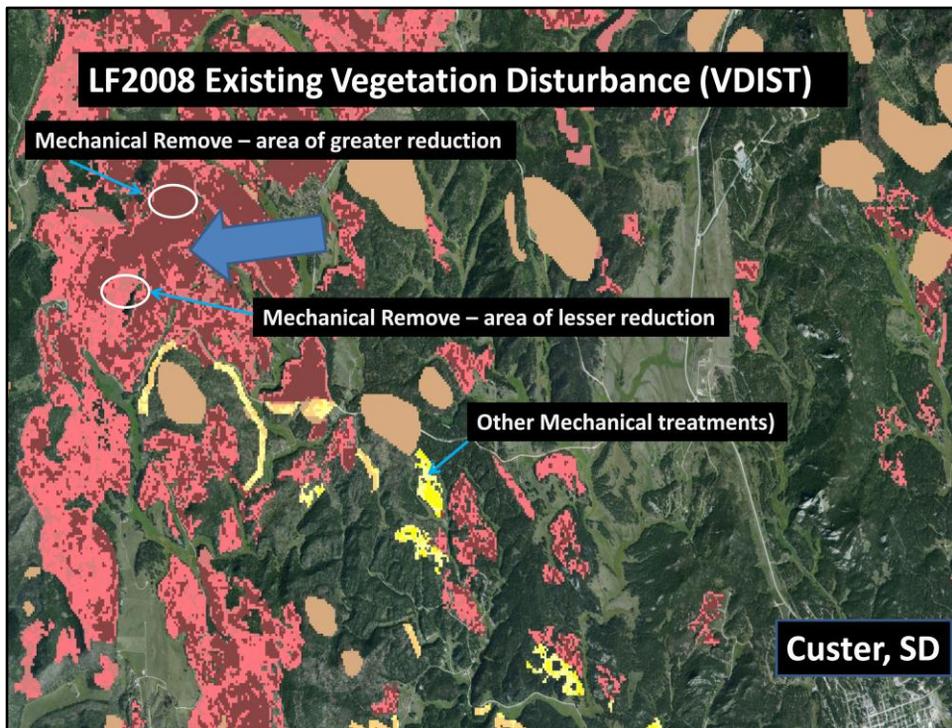
- You are viewing the Black Hills area of South Dakota. The town Custer, SD is in the lower right hand corner of the image.
- This shows a natural color aerial image from Bing.
- Ownership in this area is primarily US Forest Service, with interspersed private inholdings.



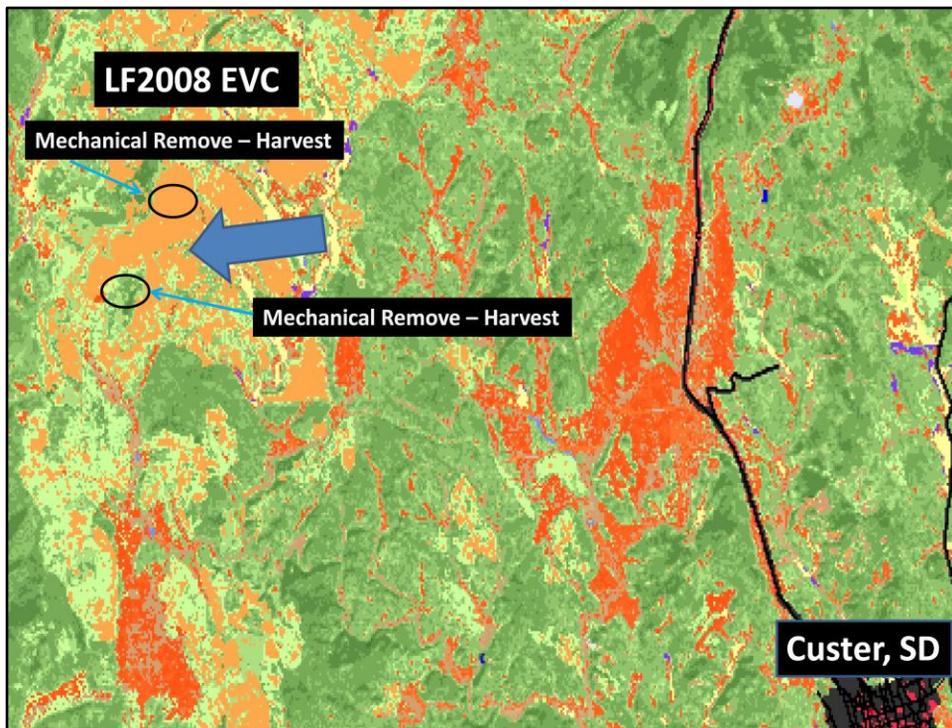
- Notice two particular locations indicated by ellipses – highlighted by the blue arrow.
- The slide image is LANDFIRE 2001 (LF_1.0.5) Existing Vegetation Cover (EVC) product which presents the canopy cover in percent (0-100%) by lifeform.
- Green tones: Forest cover—darker green representing higher forest cover and lighter green representing lower forest cover.
- Yellow and Orange tones: Herbaceous and Shrub cover respectively—darker orange representing higher cover and lighter representing lower shrub cover.



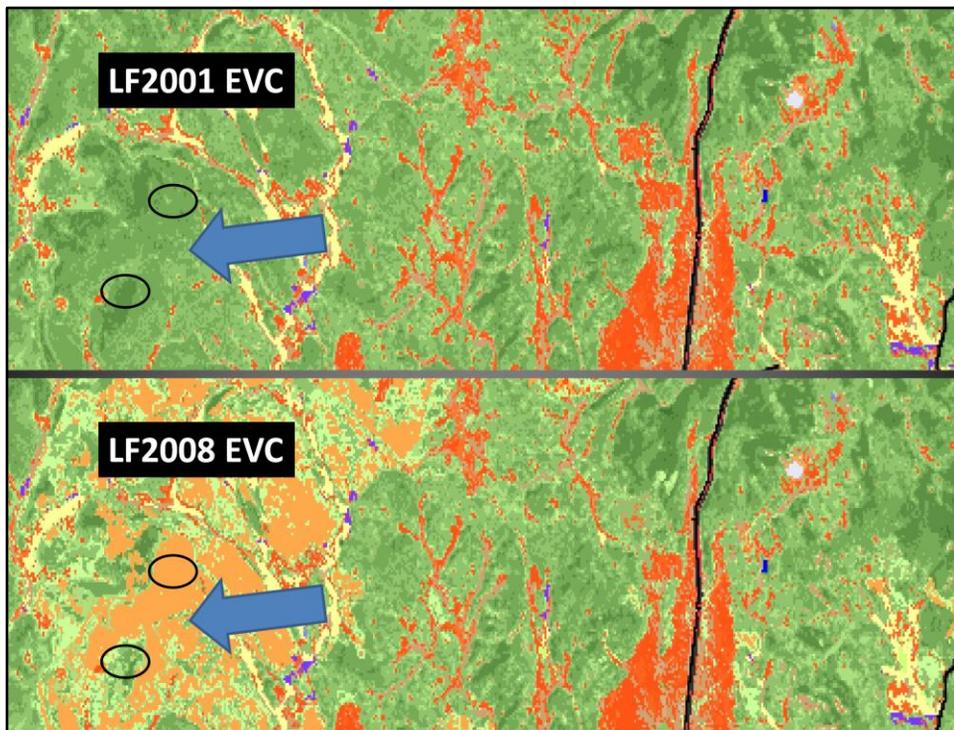
- LANDFIRE uses three data sources for biennial updates:
 - Monitoring Trends in Burn Severity (MTBS) wildland fire data,
 - the boundaries of vegetation disturbance ‘events’ submitted by local staff and/or as part of regional/national databases, and
 - a remote sensing change detection process based upon Landsat imagery.
 - This shows the Bing natural color image overlaid on the LANDFIRE Events data for this area. The LANDFIRE Events polygons {yellow, brown, and purple} represent 8 years of activities. LANDFIRE tried to capture the following events in its updating process. Development, Clearcut, Harvest, Thinning, Mastication, Other Mechanical, Wildland Fire, Wildland Fire Use, Prescribed Fire, Weather, Insecticide, Chemical, Insects, Disease, Insect/Disease, Herbicide, and Biological.
- The LANDFIRE Events represented in this image are; A). Yellow polygons = “Harvest”, B). Brown polygons = “Insect disturbances”, and C). Purple polygons = “Other Mechanical”.
- These events were submitted to LANDFIRE, or to other national data bases that the LANDFIRE team mines for this type of event information.
 - Note the two ellipses that have been placed on the LANDFIRE information as areas of focus for your attention as we will be exploring these areas further in these harvest polygons – highlighted by the blue arrow.



- This is the LF2008 Vegetation Disturbance layer
- The two ellipses represent different levels of mechanical removal (greater and lesser reduction of forest material) – highlighted by the blue arrow(s).
- Pink toned polygons represent a Mechanical Remove disturbance: darker shades within these pink areas represent greater severity (impact / more reduction) and lighter shades represent lower severity (impact / less reduction).
- Insect polygons {brown} located by LANDFIRE are **labeled as low severity since the vegetation change or impact is not as great for this time period.**
- **Other Mechanical treatment polygons {yellow} in the LANDFIRE Existing Vegetation Disturbance (VDIST) are also labeled as low severity.**



- This is the LANDFIRE 2008 (LF_1.0.0) Existing Vegetation Cover (EVC) representing landscape conditions at the end of CY2008.
 - Notice the data changes in the ellipses – highlighted by the blue arrow (as well as the overall view)
 - Lower ellipse: Area of lesser reduction from Harvest activities which results in a lower severity for this location and subsequently has a reduced forest cover in LF2008 from the condition in LF2001
 - Upper ellipse: Area of greater reduction from Harvest activities which results a higher severity disturbance converting forest cover to shrub cover between LF2001 and LF2008
- There may or may not be corresponding changes in Existing Vegetation Type (EVT) or Existing Vegetation Height (EVH) depending on the type and severity of the identified disturbance.
- LANDFIRE can identify vegetation changes using imagery-based change detection techniques, even in the absence of other sources of information. However, the process is strengthened when there are multiple sources of disturbance/change information that LANDFIRE can rely on which creates a convergence of evidence due to all of the data sources.



You can see that Existing Vegetation Cover (EVC) is indeed changing in the intervening 7-8 years for 2001 to 2008.

Summary

- LANDFIRE updates vegetation and related layers to better reflect current conditions
- LANDFIRE uses several data sets and methods to drive the update process
- A key component and driver of the update process is user-submitted disturbance information



- LANDFIRE currently updates vegetation and related spatial layers on a 2 year cycle (biennial update) — the next delivery of LANDFIRE 2010 [LF2010 (LF_1.2.0)] in the Spring of 2013.
- The update process is based on other national mapping programs (MTBS – Monitoring Trends in Burn Severity, NLCD – National Land Cover Database, NWI – National Wetlands Inventory, NASS – National Agricultural Statistics Service, etc.), submitted disturbances from the field, and imagery-based change detection techniques.
- The user community can participate in the update process by submitting disturbance information to national data bases and/or directly to LANDFIRE.